Network Working Group	P. Saint-Andre
Internet-Draft	J. Hildebrand
Intended status: Informational	M. Miller
Expires: April 26, 2012	Cisco
	October 24, 2011

JavaScript Object Notation (JSON) Namespaces
draft-saintandre-json-namespaces-00

Abstract

This document defines a convention for namespaced variable names in
JavaScript Object Notation (JSON) data.

Status of this Memo

Copyright Notice

Table of Contents

1. Introduction

JavaScript Object Notation [JSON] is a text format for the
serialization of structured data, derived from the object literals of
the JavaScript programming language. Unlike the Extensible Markup
Language [XML], JSON does not provide methods for qualifying variable
names, as XML does for elements and attributes [XML-NAMES]. However, in
certain circumstances such namespaces can be useful. Therefore, this
document defines a convention for namespaced variable names in JSON
data.
The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and
"OPTIONAL" in this document are to be interpreted as described in
[RFC2119].
Feedback is welcome on the apps-discuss@ietf.org mailing list.

2. Namespace Convention

Various approaches have been proposed to namespaces (or "distributed
extensibility") in JSON, from a centralized registry of variable names
to prefixing with the "reverse domain name" of the namespace owner
(e.g., "com.example.foo"). All of these approaches are preferable to
use of the "x-" prefix [XDASH] or a similar construction, since they
provides attribution and traceability for each namespace. The
convention described here follows "Clark Notation" [CLARK] by preceding
a variable name with a Uniform Resource Identifier [URI] enclosed in
curly brackets ('{' and '}'). The use of URIs provides improved re-use
of data models across existing representations, especially with XML
when qualified by XML namespaces.
In JSON, a variable name that is namespaced in this way is the "string"
production when appearing as the first part of the "member" production,
as those productions are defined in [JSON]. An example follows.

    {http://example.com/foo}bar

Namespace names MUST NOT include the characters '{' and '}'.

3. When and How to Use JSON Namespaces

The convention described here is not intended for use in "standalone" JSON objects, especially those defined by a JSON schema [JSON-SCHEMA]. Instead, it is intended for use when a particular variable is likely to be re-used or interleaved within data that represents other JSON objects. The following example shows a namespaced variable name used within an OAuth access token [OAUTH].

```
{
  "access_token":"2YotnFZFEjr1zCsicMWpAA",
  "token_type":"example",
  "expires_in":3600,
  "refresh_token":"tGzv3JOkF0XG5Qx2TlKWIA",
  "{http://example.com/foo}bar":"baz"
}
```

Namespaces MUST NOT be used for core JSON attributes (such as 'char' and 'number').
An application MUST ignore namespaced variables that it does not understand, where by "ignore" is meant "discard the data without acting upon it or returning an error to the sender".

4. Security Considerations

This convention introduces no security concerns beyond those described in [JSON].

5. IANA Considerations

This document requests no actions of the IANA.

6. References

6.1. Normative References

[JSON]	Crockford, D., "The application/json Media Type for JavaScript Object Notation (JSON)", RFC 4627, July 2006.
[RFC2119]	Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

6.2. Informative References

[CLARK]	Clark, J., "Clark Notation", February 1999.
[JSON-SCHEMA]	Zyp, K and G Court, "A JSON Media Type for Describing the Structure and Meaning of JSON Documents", Internet-Draft draft-zyp-json-schema-03, November 2010.
[OAUTH]	

	Hammer-Lahav, E, Recordon, D and D Hardt, "The OAuth 2.0 Authorization Protocol", Internet-Draft draft-ietf-oauth-v2-22, September 2011.
[URI]	Berners-Lee, T., Fielding, R. and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005.
[XDASH]	Saint-Andre, P, Crocker, D and M Nottingham, "Deprecating Use of the "X-" Prefix in Application Protocols", Internet-Draft draft-ietf-appsawg-xdash-02, October 2011.
[XML]	Maler, E., Yergeau, F., Sperberg-McQueen, C., Paoli, J. and T. Bray, "Extensible Markup Language (XML) 1.0 (Fifth Edition)", World Wide Web Consortium Recommendation REC-xml-20081126, November 2008.
[XML-NAMES]	Thompson, H., Hollander, D., Layman, A., Bray, T. and R. Tobin, "Namespaces in XML 1.0 (Third Edition)", World Wide Web Consortium Recommendation REC-xml-names-20091208, December 2009.

Appendix A. Acknowledgements

This document has benefited from texts about distributed extensibility posted on the Internet by David Baron, Tim Bray, James Clark, Yaron Goland, Joe Gregoria, Mike Hanson, Jack Moffitt, Mark Nottingham, and Simon St. Laurent.

Authors' Addresses

Peter Saint-Andre Saint-Andre Cisco 1899 Wynkoop Street, Suite 600 Denver, CO 80202 USA Phone: +1-303-308-3282 EMail: psaintan@cisco.com

Joe Hildebrand Hildebrand Cisco 1899 Wynkoop Street, Suite 600 Denver, CO 80202 USA EMail: jhildebr@cisco.com

Matt Miller Miller Cisco 1899 Wynkoop Street, Suite 600 Denver, CO 80202 USA Phone: +1-303-308-3282 EMail: mamille2@cisco.com